

The Modern Software Developer

CS146S
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Guest Lecture - 10/17/25



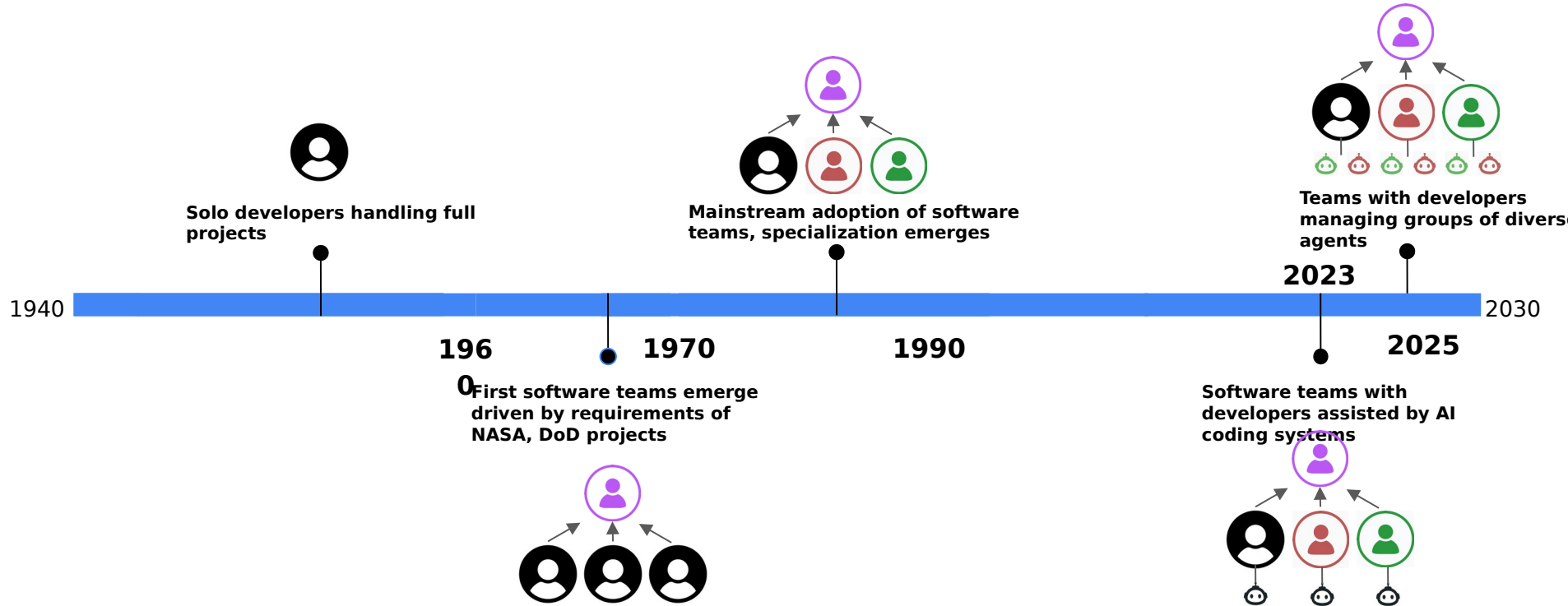
Anthropic Creator of [Claude Code](#), Boris Cherny

How to be an Agent Manager

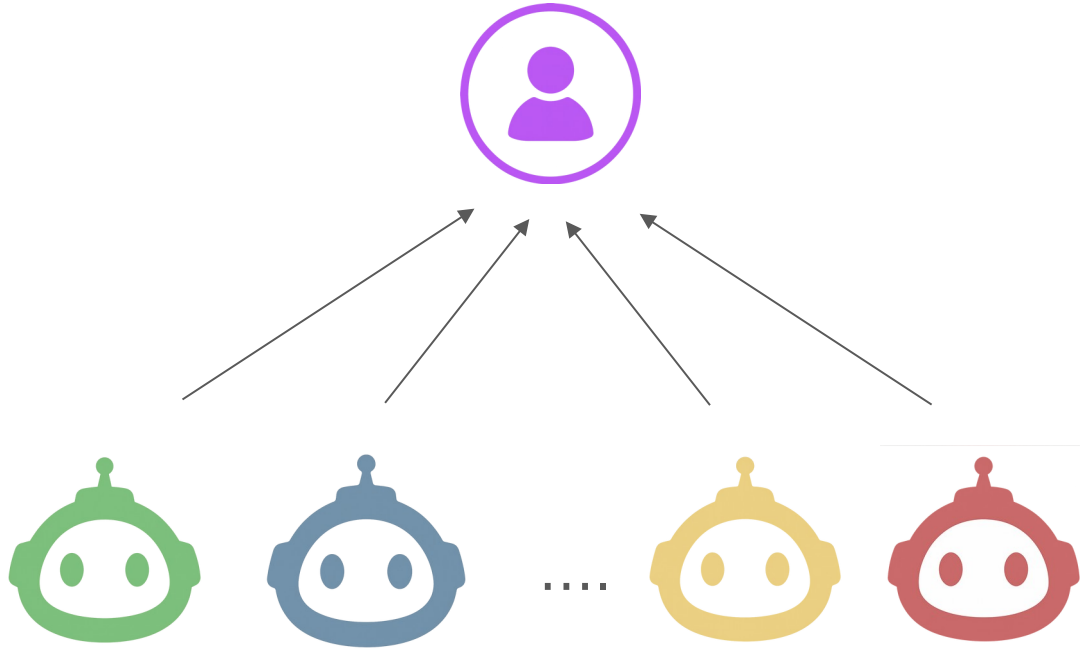
Why

- Development evolution
 - Single developer managing single developer's output
 - Lead managing many developers worth of output
 - Lead managing many developers worth of output (assisted by an AI system)
 - Single developer managing many AI agents worth of work

A brief history of software teams



Goals



Software task steps

- Provide high level requirements □
- Convert requirements into a design doc □/□
- Implement solution from doc □
- Add tests □
- Ensure CI (continuous integration) passes □
- Code review □
- Update docs □

Techniques for directing agents

- Agent behavior files (Claude.md/Cursorrules/agents.md)
- Hooks
- Commands
- Subagents

Hooks

- Deterministic scripts that run on predefined event types
 - PreToolUse
 - PostToolUse
 - UserPromptSubmit
 - PreCompact
 - ...and more

Commands

- Provide frequently-used prompts as files that the agent can execute
- Use cases
 - Running tests
 - Reviewing code
 - Form a git commit, push

Subagents

- Runtime delegation
- Purposes of a subagent is to
 - Create distinct developer personas for different types of work (frontend, backend, etc)
 - Cleanly separate contexts for different work streams
- Offer
 - Customized system prompts, tools, and a separate context window
 - A move toward agents managing other agents
- Use cases
 - <https://github.com/vijaythecoder/awesome-claude-agents/blob/main/CLAUDE.md>
 - https://github.com/SuperClaude-Org/SuperClaude_Framework

Best practices

- You need careful backstops
 - Tests in codebase
 - CI/CD best practices
- Auditability of each agent
 - Label every diff made by an agent
- Different models for different classes of tasks
- More complex tasks you may need to handhold a bit more upfront vs fully async ones
- Checkpoint (commit) regularly

Workflow walkthrough

Open questions

- How can we automate the first 10-20% research phase of any task?
- How to maintain a queue of pending tasks (easier for 1-off changes)?